Spike: Task 14

Title: Agent Markmanship

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# Goals / Deliverables

* Basic deliverables:
  + An agent targeting simulation with:
    - An attacking agent (stationary or otherwise)
    - A moving target agent (can move between two points) that shows when it has been hit
    - Several weapons that can successfully hit the target, including:
      * Rifle (fast, accurate)
      * Rocket (slow, accurate)
      * Hand gun (fast, inaccurate)
      * Hand grenade (slow, inaccurate)
* Extensions:
  + Account for rate of fire and effect range (specifically, make a shotgun with a low rate of fire and short but deadly effective range; move the attacker closer before shooting).
  + Splash damage (projectile that explodes on the ground; attacker should take this into account when aiming).
  + A target that can avoid slow projectiles and or move to hiding spots when attacked.

# Technologies, Tools, and Resources Used

* Command prompt (for executing and testing the code)
* SublimeText (for editing code)
* Learning materials on Canvas (for instructions and sample code)

# Tasks Undertaken

* I copied the Tactical Steering project from task 11 into the task 14 folder.

# Code Snippets

# Instructions for Operating the Code

* ?: Scroll through target modes (stationary, moving between two points, evading).
* ?: Scroll through weapon modes.
* ?: Toggle walls on and off.
* ?: Toggle obstacles and hiding spots on and off.
* ~~E: create a new evader agent.~~
* ~~H: create a new hunter agent.~~
* O: create a new obstacle in a random but valid position.
* R: reposition all obstacles in random but valid positions. Obstacles are automatically repositioned when the window changes size.
* P: pause or un-pause the game.
* Escape: exit the game.
* ~~F: toggle friction method on and off.~~
* I: toggle the display of agents’ force, velocity and net desired change in position.

# In-Simulation Screenshot

# What I Found Out